STS CONSULTANTS

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December 22, 2003



Mr. Fred Micke, On-Scene Coordinator
US Environmental Protection Agency - Region 5
77 W. Jackson Blvd., SE-5J
Chicago, Illinois 60604-3590

RE: Monthly Progress Report for November 2003, 221 N. Columbus Drive, Chicago, Illinois - STS Project No. 1-32193-XC

Dear Mr. Micke:

In accordance with the Work Plan[1] STS Consultants, Ltd. (STS) is providing a monthly progress report that identifies the actions taken in October 2003 and activities planned for November 2003.

## PROGRESS DURING NOVEMBER 2003

1. Surveying for radiologically-impacted soil continues to be performed on a periodic basis for infrastructure related activities within the former slips area.

2. On October 29, 2003, remediation was initiated for of the areas identified on October 9. The areas were designated as exclusion zones 13D East, 13D West and Caisson C.2-3. The remedial activities were conducted in late October and completed on November 7. Table 1 below summarizes the quantity of radiologically-impacted material excavated on November 7 along with a cumulative total for the project.

**Table 1**
**Impacted Soil Loading Summary**

| Date | Containers Loaded | Cumulative Project Total |
|---|---|---|
| November 7, 2003 | 3 | 254 |

3. Verification surveys of the remediated exclusion zones (13D East, 13D West and Caisson C.2-3) were performed by the USEPA contractor on November 11 and notices of successful verification signed by the USEPA on November 12, 2003.

4. Personal and area air monitoring was conducted during the excavation of radiologically-impacted soil on November 7, 2003. No exceedances of the allowable limits for personal or area air monitoring were observed. Results for the air monitoring conducted on November 7 are included within Attachment 1.

## PLANNED ACTIVITIES FOR DECEMBER 2003

1. There are currently no immediate plans for conducting infrastructure activities that will expose subsurface soil within the former slip areas. Surveying for radiologically-impacted soil will resume when project activities have the potential to exposed subsurface soil within the former slips area. The USEPA will be notified upon discovery of any radiologically-impacted materials. Excavation activities will take place as necessary to remediate radiologically-impacted soil. The USEPA will be requested to conduct verification surveys and sign-off that the areas have been successfully remediated.

[1] STS (revised September 30, 2002) Work Plan for Investigation and Removal of Radiologically Impacted Soil, Lakeshore East LLC, 221 N. Columbus Drive, Chicago, Illinois.

2. As requested by the USEPA, a survey of the former pond area in the northwestern portion of the site is planned for early December. With the completion of this survey all of the surface areas of project site have been surveyed for the presence of radiologically-impacted materials.

3. Preparation of an Addendum to the Completion Report has been initiated. This Addendum will cover the remedial activities that have occurred since the completion of the activities outlined by the September 2002 Work Plan.

4. Monthly reports will to be submitted to the USEPA until approval of the closure report.

Please contact us at 847-279-2500 with any questions regarding this report.

Regards,

STS CONSULTANTS, LTD.

Steven C. Kornder, Ph.D.
Senior Project Geochemist

Attachments

cc: Kara Hughes, Lakeshore East, LLC
Sean Bezark, Greenberg Traurig
Barbara Magel, Karaganis, White & Magel
Mark Krippel, Kerr-McGee Chemical LLC

ATTACHMENT 1

Air Monitoring

# Area Air Monitoring Summary Sheet - Weekly Effluent Concentration Report

*Lakeshore East Project - 221 North Columbus Drive, Chicago, IL*

***North Monitor*** **Report #34 11/3/03 - 11/7/03** **(High Volume)**

| Date | Time Sampled (minutes) | Effluent Concentration in uCi/ml | Concentration x Sample Min / Day | Comments |
|---|---|---|---|---|
| 11/3/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/4/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/5/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/6/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/7/03 | 346 | 1.50E-15 | 5.19E-13 | |
| | 346 | 1.50E-15 | 5.19E-13 | |

$C_{avg} = \frac{\Sigma T_{si} C_i}{\Sigma T_s}$

*Eq A.9 NUREG 1400*

**Time Weighted Weekly Effluent Concentration (North) = 1.50E-15 uCi/ml**

*Percentage of Release Limit of 4E-15uCi/ml = 37.50%*

***South Monitor***

| Date | Time Sampled (minutes) | Effluent Concentration in uCi/ml | Concentration x Sample Min / Day | Comments |
|---|---|---|---|---|
| 11/3/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/4/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/5/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/6/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/7/03 | 338 | 0.00E+00 | 0.00E+00 | |
| | 338 | 0.00E+00 | 0.00E+00 | |

$C_{avg} = \frac{\Sigma T_{si} C_i}{\Sigma T_s}$

*Eq A.9 NUREG 1400*

**Time Weighted Weekly Effluent Concentration (South) = 0.00E+00 uCi/ml**

*Percentage of Release Limit of 4E-15uCi/ml = 0.00%*

***East Monitor***

| Date | Time Sampled (minutes) | Effluent Concentration in uCi/ml | Concentration x Sample Min / Day | Comments |
|---|---|---|---|---|
| 11/3/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/4/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/5/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/6/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/7/03 | 336 | 0.00E+00 | 0.00E+00 | |
| | 336 | 0.00E+00 | 0.00E+00 | |

$C_{avg} = \frac{\Sigma T_{si} C_i}{\Sigma T_s}$

*Eq A.9 NUREG 1400*

**Time Weighted Weekly Effluent Concentration (East) = 0.00E+00 uCi/ml**

*Percentage of Release Limit of 4E-15uCi/ml = 0.00%*

***West Monitor***

| Date | Time Sampled (minutes) | Effluent Concentration In uCi/ml | Concentration x Sample Min / Day | Comments |
|---|---|---|---|---|
| 11/3/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/4/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/5/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/6/03 | 0 | 0.00E+00 | 0.00E+00 | No Work |
| 11/7/03 | 339 | 0.00E+00 | 0.00E+00 | |
| | 339 | 0.00E+00 | 0.00E+00 | |

$$C_{avg} = \frac{\Sigma T_{s,i} C_i}{\Sigma T_s}$$

*Eq A.9 NUREG 1400*

**Time Weighted Weekly**
**Effluent Concentration (West) = 0.00E+00 uCi/ml**
*Percentage of Release Limit of = 0.00%*

# Area Air Monitoring Summary Sheet - Staplex High Volume Pumps (Daily Analysis)

*Lakeshore East Project - 221 North Columbus Drive, Chicago, IL*

**Report No. 34** **November 3, 2003 - November 7, 2003**

| Sample ID | date sampled | start time | stop time | total time sampled | cubic ft/ min (CFM) | sample volume analyzed | day after analysis | | | | | four day analysis | | | | | % of Limit 4.00E-15 uCi/ml |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | date analyzed | gross counts | bkg counts | net cpm | Concentration in uCi/ml | date analyzed | gross counts | bkg counts | net cpm | Concentration in uCi/ml | |
| N2066 | 11/7/03 | 8:12am | 1:58pm | 348 | 47 | 1.61E+07 | 11/10/03 | 16 | 13 | 0.1 | 2.26E-16 | 11/11/03 | 15 | 13 | 0.067 | 1.50E-15 | 37.60% |
| S2066 | 11/7/03 | 8:14am | 1:52pm | 338 | 47 | 1.57E+07 | 11/10/03 | 13 | 13 | 0 | 0.00E+00 | 11/11/03 | 13 | 13 | 0 | 0.00E+00 | 0.00% |
| E2066 | 11/7/03 | 8:17am | 1:53pm | 336 | 45 | 1.50E+07 | 11/10/03 | 14 | 13 | 0.03333 | 8.09E-16 | 11/11/03 | 12 | 13 | 0 | 0.00E+00 | 0.00% |
| W2066 | 11/7/03 | 8:11am | 1:50pm | 339 | 44 | 1.48E+07 | 11/10/03 | 10 | 13 | 0 | 0.00E+00 | 11/11/03 | 12 | 13 | 0 | 0.00E+00 | 0.00% |

Friday November 7, 2003 was the only day during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days.

# Personal Air Monitoring Summary Sheet (PAM's -Daily Analysis)

**Report No. 34 November 3 - November 7, 2003**

*Lakeshore East Project - 221 North Columbus Drive, Chicago, IL*

*** All PAM's with elevated counts on day after analysis are recounted after 4 days (see attached)

| Date Collected | Name | Sample ID | PAM # | Flow Rate (lpm) | Total Time Sampled | Total Sample Volume (ml) | Analysis Date | Gross Counts (30 min) | Bkg Counts (30 min) | Net CPM | Sample Concentration (uCi/ml) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/7/03 | Glenn Huber | PAM2287 | 006-234 | 2.5 | 380 | 950000 | 11/10/03 | 11 | 13 | 0.00 | 0.00E+00 |
| 11/7/03 | Odell Morgan | PAM2288 | 002-574 | 2.5 | 380 | 950000 | 11/10/03 | 13 | 13 | 0.00 | 0.00E+00 |

Friday November 7, 2003 was the only day during this week when thorium contaminated material was excavated and loaded. Air Monitoring not required on other work days.

Note: Official airborne Th-232 concentrations are obtained from 4 Day Analysis.
See attached 4 Day Analysis Form for Occupational Dose Limit Information.

# Personal Air Monitoring Summary Sheet (PAM's -4 Day Analysis)

Report No. 34 November 3 - November 7, 2003

*Lakeshore East Project - 221 North Columbus Drive, Chicago, IL*

***Note: All samples on this page were analyzed after 4 days to allow for thorium daughter decay

| Date Collected | Name | Sample ID | PAM # | Flow Rate (lpm) | Total Time Sampled | Total Sample Volume (ml) | Analysis Date | Gross Counts (30 min) | Bkg Counts (30 min) | Net CPM | Sample Concentration (uCi/ml) | % of DAC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No 4 day analysis of PAM's required for this monitoring period | | | | | | | | | | | | |

Occupational Dose Limit for Occupational Radiation Exposure = 5 rem Total Effective Dose Equivalent

2000 DAC-Hours = 5 rem

DAC (Derived Air Concentration) for Th-232 = 5E-13uCi/ml

Administrative Site Limit for Occupational Exposure = 30% Th-232 DAC = 1.5E-13 uCi/ml